



Inspiring Women: Becky Olinger

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From cool explosives to science careers

Becky Olinger has loved to blow things up ever since studying the chemistry and engineering of explosives as an undergraduate student at the New Mexico Institute of Mining and Technology's Energetic Materials Research and Testing Center in Socorro.

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LANL Homemade Explosives School

Today, Olinger is the Associate Director for Los Alamos National Laboratory's Explosives Center and the Program Manager for Advanced Materials as well as the Los Alamos Collaboration for Explosives Detection. In addition, she has played a key role in the Laboratory's Homemade Explosives School, which helps U.S. military personnel combat the many types of explosives they might encounter while deployed.

Olinger considers explosives work "the coolest thing ever," but she also has another passion. She loves to share her scientific interests with rural middle- and high school students and tell them about the many career options in the science, technology, engineering and mathematics (STEM) fields.

Sharing the passion

Olinger was born and raised in Tucumcari, New Mexico, a community that essentially survives on the farming and ranching industries and the businesses serving travelers along Interstate 40. She was one of only two Tucumcari high school students out of a class of 110 who went on to earn a PhD, in Olinger's case a PhD in physical chemistry from the University of New Mexico.

"Most Tucumcari kids follow in the footsteps of their parents and become farmers, ranchers or service industry participants," Olinger says. "Within the small number that goes to college at all, an even much smaller percentage selects STEM fields."

Olinger believes that Tucumcari middle- and high school students, and students from other rural settings, often shy away from selecting STEM career paths because their local schools tend to lack robust science programs and because the students themselves are unaware of available college resources.

"Several years ago I started to work with administrators, teachers and students in Tucumcari during my spare time, including those from Mesalands Community College,"

Olinger explains, “and I’m also reaching out to New Mexico Tech to help build an educational bridge.”

Leaving the comfort zone

Olinger knew from an early age that she did not want to become a farmer or rancher, and she knew that she would have to leave home to pursue an advanced education. But even though she was a good student, the transition to college had its challenges.

“I felt fairly confident heading into my first physics course,” Olinger recalls, “until the professor invited us to look at the students to our left and right, because it was expected that approximately half of the class would not make it to the next semester. That was a bit of a wake-up call.”

Olinger’s response was to study even harder and fill in whatever she had not been taught in Tucumcari.

“It all comes down to how determined you are,” Olinger says. “You can easily walk away and settle for something else because it seems easier, or you can invest the time and hard work that’s needed to succeed. There is no greater feeling than achieving your goals.”

Comprehensive energetic materials development, characterization and testing are key strengths at Los Alamos National Laboratory. An experimental explosive is shown igniting during small-scale impact testing.

Olinger works for the Principal Associate Directorate for Global Security’s Emerging Threats Program.

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